

**The Role of Education and Public Outreach (E/PO)  
in Mars Reconnaissance Orbiter(MRO)-2005  
Investigations**

**Presented at the MRO Pre-Proposal Conference  
NASA Headquarters, Washington DC**

**Dr. Jeffrey D. Rosendhal  
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# OSS Education and Outreach

## What Are We Trying To Do?

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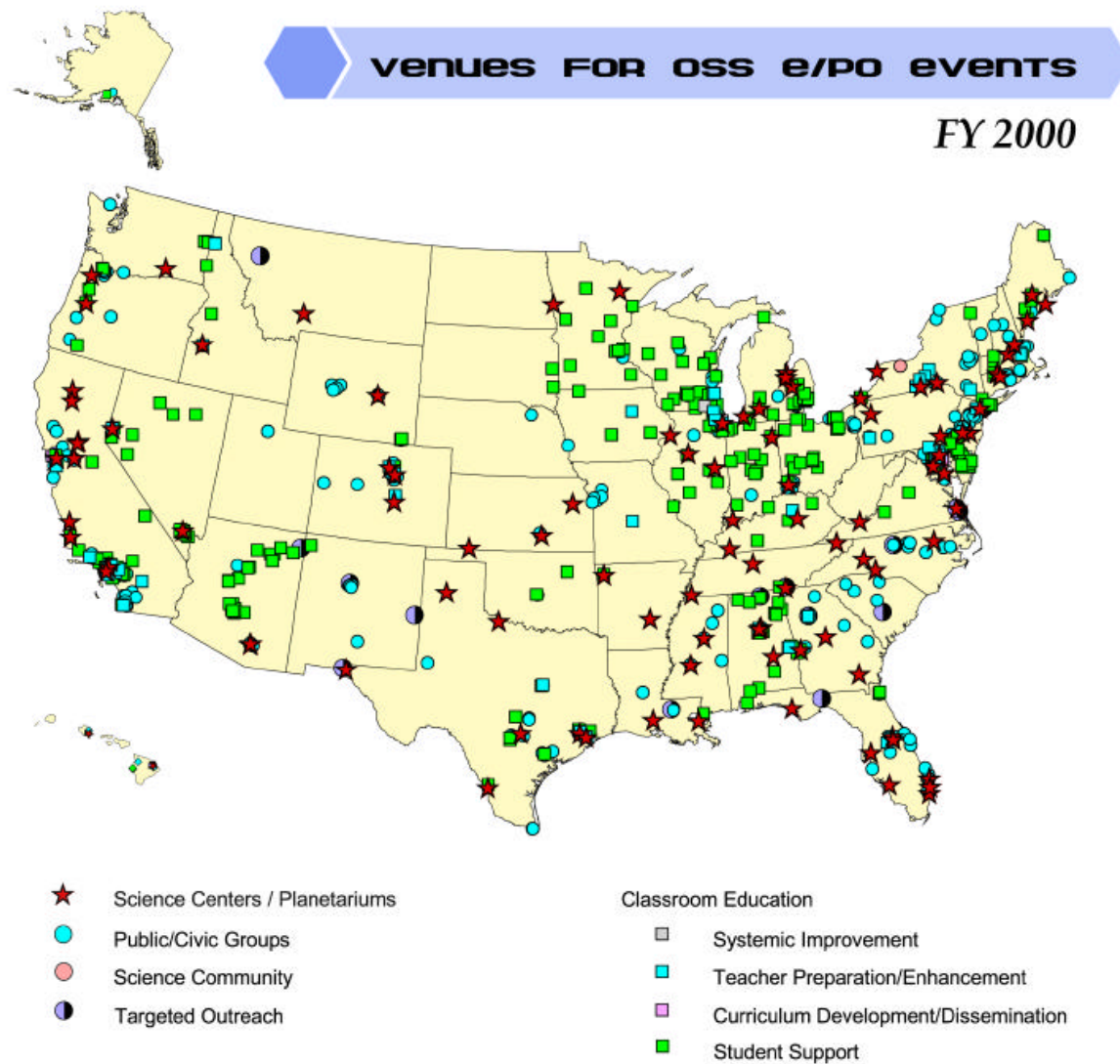
- Share the excitement of space science discoveries with the public
- Enhance the quality of science, mathematics and technology education, particularly at the pre-college level
- Help create our 21st century scientific and technical workforce

# **OSS Education and Public Outreach**

## **Where Are We Now?**

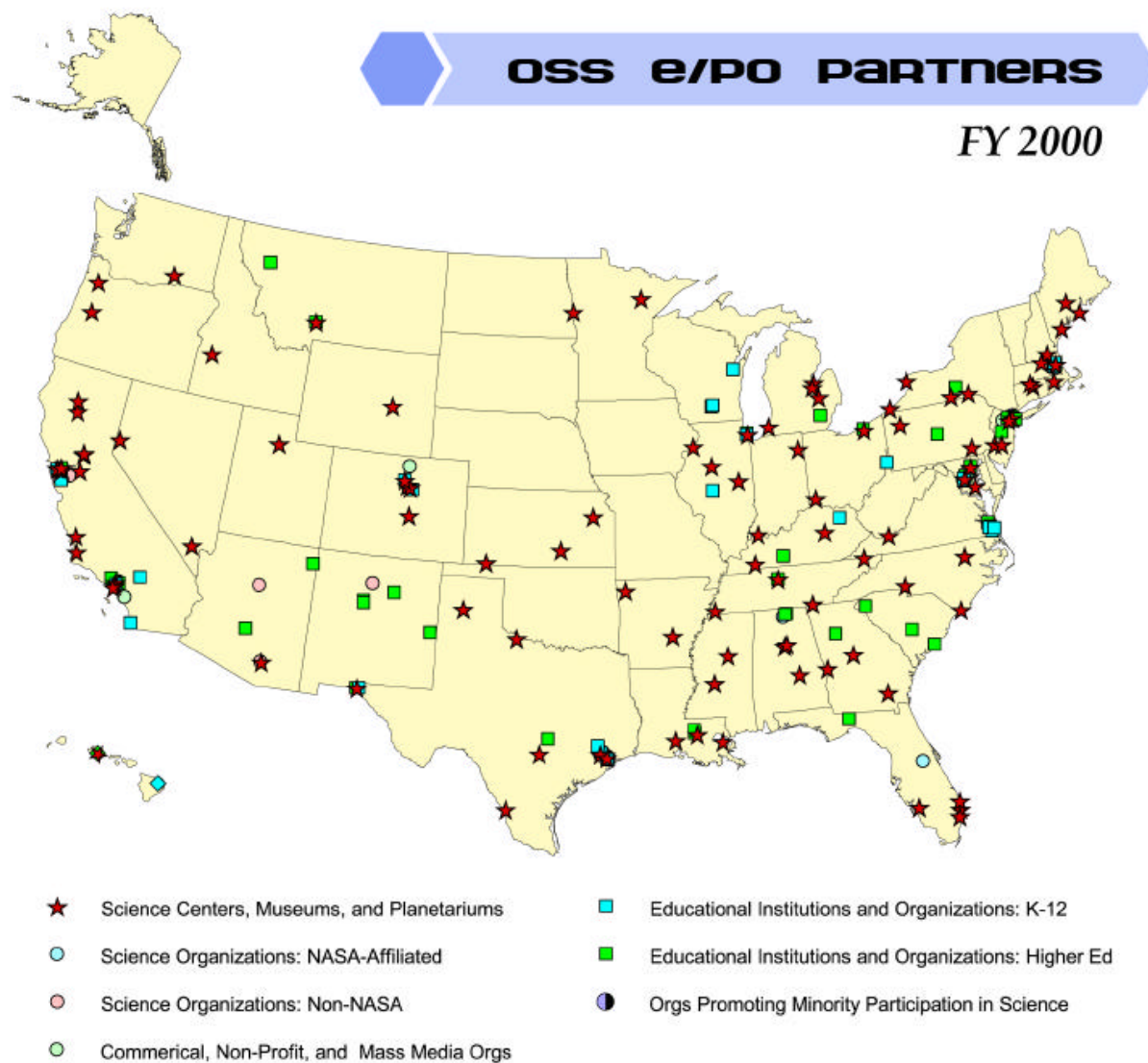
- OSS is firmly committed to making a substantive contribution to pre-college education and the broad public understanding of science, mathematics, and technology
- A major national program of space science education is now underway. For further information see:
  - The OSS FY 2000 E/PO Annual Report (January 2001)
  - The OSS E/PO Newsletters (January and May 2001)
  - The OSS E/PO Homepage

- Includes over 1500 discrete events at venues encompassing all 50 states, the District of Columbia, Guam, Australia, Canada, Mexico, and Peru.



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- Involves over 200 partner institutions and organizations.



# **OSS Education and Public Outreach**

## **Two Classes of MRO-2005 Scientific Participants**

- **PI Instrument Investigations**
  - Required to include an E/PO component as a part of their overall proposals
  - OSS expects that proposers will devote adequate resources to the planning and implementation of such an effort
  - E/PO component will be professionally evaluated and the results will be considered as part of the overall selection process
  - Will be expected to coordinate their individual E/PO programs with the umbrella Mars Exploration E/PO Program being carried out through JPL
- **Facility Team Members and Team Leaders**
  - Will be expected to become actively involved in the umbrella Mars Exploration E/PO Program
  - Individual scientists will be expected to spend an average of ~5% supporting E/PO activities (and must budget accordingly)
  - Statement of commitment required in the proposal/Submission of ideas encouraged

# **OSS Education and Public Outreach**

## **What Are We Looking For: Instrument Investigations?**

- A credible story containing specifics and commitments/reality not rhetoric
  - See Appendix C of the AO
  - A good case can be laid out in 4 pages
  - Letters of support/commitment from E/PO partners are important
- A program that is aligned to the OSS E/PO Strategy and E/PO Implementation Plan
  - The content of both these documents is directly reflected in the E/PO Criteria that will be used to evaluate proposals
- A commitment to adequately fund the proposed E/PO program
  - OSS Guideline: 1-2% of the investigation cost through all phases
- Plans for coordination with the umbrella Mars Exploration E/PO program

**Evaluation will be done as part of the TMC0 process**  
**E/PO may play a role in the selection**

# **OSS Education and Public Outreach**

## **General Evaluation Criteria**

The general criteria to be applied to the evaluation of the E/PO component of Instrument Investigations are:

- The quality, scope and realism of the proposed E/PO program including the adequacy, appropriateness, and realism of the proposed budget
- The capability and commitment of the proposer and the proposer's team and the direct involvement of one or more science team members in overseeing and carrying out the proposed E/PO program
- The establishment or continuation of effective partnerships with institutions and/or personnel in the fields of education and/or public outreach as the basis for and an integral element of the proposed E/PO program
- The adequacy of plans for evaluating the effectiveness and impact of the proposed education and outreach activity



# **OSS Education and Public Outreach**

## **Specific Evaluation Criteria**

To ensure that the goals and objectives of the OSS E/PO strategy are realized in practice, proposals will also be evaluated using one or more of the following specific criteria as appropriate:

- For proposals dealing directly with or strongly affecting the formal education system (e.g., through teacher workshops or student programs carried out at informal education institutions such as science museums and planetariums), the degree to which the proposed E/PO effort is aligned with and linked to nationally recognized and endorsed reform efforts and/or reform efforts at the state or local levels
- The degree to which the proposed effort contributes to the training of, involvement in, and broad understanding of science and technology by underserved and/or underutilized groups
- The potential for the proposed E/PO activity to expand its scope by having an impact beyond the direct beneficiaries, reaching large audiences, being suitable for replication or broad dissemination, or drawing on resources beyond those directly requested in the proposal

## **OSS Education and Public Outreach Other Evaluation Considerations**

- Plans for coordination of the proposed activities with the umbrella Mars Exploration E/PO program will also be considered in the evaluation process

Contact: Ms. Michelle Viotti  
JPL Mars Education and Outreach Coordinator  
818-354-8774  
Michelle.Viotti@jpl.nasa.gov

# **OSS Education and Public Outreach Expectations**

Based on the funding guidelines..., the E/PO programs submitted in response to this Announcement may involve the expenditure of substantial resources. It is generally expected that such E/PO programs will have a breadth and depth commensurate with those resources; will be multi-faceted in nature; address a number of different aspects of education and outreach contained in the specific criteria; and have state, regional, or national scope.

However, the umbrella JPL Mars Exploration E/PO Program is already planning and implementing a number of national efforts. Therefore, the E/PO programs associated with PI Instrument proposals may be more focused and regional in nature and will be judged accordingly

# **OSS Education and Public Outreach**

## **Why Have Individual Mars E/PO Programs?**

The long-range goal of having Instrument PI's (and their Teams) associated with individual Mars missions involved in E/PO is to establish a network of Mars scientists across the country who are both carrying out their own E/PO programs and acting as local agents for the Mars Program's national efforts

# **OSS Education and Public Outreach**

## **Sources of Information**

- A Short Reading List:
  - OSS Education and Public Outreach Strategy
  - OSS Education and Public Outreach Implementation Plan
  - OSS Explanatory Guide for the Education/Public Outreach Evaluation Criteria
  - OSS FY 2000 Education and Public Outreach Annual Report
  - OSS E/PO Newsletters
- The OSS “Explanatory Guide”
  - Contains answers to “Frequently Asked Questions”
  - Describes in more detail what the Evaluation Criteria mean Was developed to ensure that E/PO efforts are prepared and evaluated on a consistent basis
- Michelle Viotti

# **OSS Education and Public Outreach**

## **Sources of Assistance**

- Call your local Broker/Facilitator or the appropriate OSS Education Forum
  - The Support Network is there to help, but is not responsible for preparing the E/PO portion of your Investigation
- In accord with the operating principles developed by the Support Network, discussions with individual Teams developing proposals will be treated as proprietary
- Contact information is available through the OSS E/PO Homepage

# Support Network

## Office of Space Science Education and Public Outreach



### ○ Forums

- **Astronomical Search for Origins and Planetary Systems**
  - Space Telescope Science Institute (STScI)
- **Structure and Evolution of the Universe (SEU)**
  - Smithsonian Astrophysical Observatory
- **Solar System Exploration (SSE)**
  - Jet Propulsion Laboratory
- **Sun-Earth Connection (SEC)**
  - Goddard Space Flight Center
  - University of California at Berkeley

### Broker/ Facilitators

- Depaul University (DU)
- Lunar and Planetary Institute (LPI)
- Ohio Aerospace Institute (OAI)
- SouthEast Regional ClearingHouse (SERCH)
- Space Science Institute (SSI)

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# **OSS Education and Public Outreach**

## **Some Summary Observations**

- OSS is serious about education and public outreach
  - A major national program is now underway
- E/PO will be considered during the evaluation and selection process
  - E/PO has made a difference in some selections
- OSS has seen a significant evolution in the level of maturity, ambition and sophistication in mission E/PO programs over the past several years
  - We have high expectations for all missions
- Resources are available to help PI's in developing their proposals
  - Contact the Forums and Broker/Facilitators for help
  - Read the “Explanatory Guide” and other available documentation
- Treat E/PO with the same rigor and professionalism that you treat the science and engineering aspects of your Investigation